

ABSTRACT

A power supply system comprising: a DC power supply apparatus; a load device; a lithium ion battery for backup that is connected in parallel with said DC power supply apparatus and said load device; a charging current limiting circuit that is connected in series with said lithium ion battery and supplies a charging current of an arbitrary value independent of load fluctuations in the charging path of the lithium ion battery; a switch that disconnects said lithium ion battery from said DC power supply apparatus or said load device, or connects said lithium ion battery to said DC power supply apparatus or said load device; and a control circuit that monitors the voltage value of said charging path, sets a reference voltage setting used for setting the charging current of an arbitrary value in said charging current limiting circuit, and controls said switch when said voltage of said charging path exceeds a specified voltage value during charging.